



National Aeronautics and
Space Administration

Principal Center for Regulatory Risk Analysis and Communication

REGULATORY OVERVIEW

Proposed Rules: Gas Turbine and Combustion Turbine New Source Performance Standards

*This information was prepared by NASA's Principal Center for Regulatory Risk Analysis and Communication (RRAC PC).
An archive of regulatory alerts, summaries, and other information is posted on the RRAC PC website at
<http://www.nasa.gov/offices/rrac/home/>. If you have further questions and/or need assistance, please contact Sharon
Scroggins/MSFC (256-544-7932, sharon.scroggins@nasa.gov).*

Title: Standards of Performance for Stationary Gas Turbines; Standards of Performance for Stationary Combustion Turbines	Date [Citation]: 29 August 2012 [79 FR 52553] Comments Due: 29 October 2012
Rulemaking Type: Proposed Rule	Regulatory Agency: U.S. Environmental Protection Agency

Summary:

On 29 August 2012, the U.S. Environmental Protection Agency (EPA) proposed to amend the New Source Performance Standards (NSPS) for stationary gas turbines ([40 CFR 60 Subpart GG](#)) and stationary combustion turbines ([40 CFR 60 Subpart KKKK](#)) in response to a petition for reconsideration. Those affected by this proposed rule include owners or operators of stationary combustion turbines on which construction, modification or reconstruction began after 18 February 2005 and that have a base load rating equal to or greater than 2.9 megawatts (MW) (10 million British thermal units per hour [MMBtu/h]).

The proposed amendments are intended to clarify the intent in applying and implementing specific rule requirements, including the following that are of possible interest to NASA-related facilities:

- Expand stationary combustion turbine definition. For the purposes of determining applicability and whether a stationary combustion turbine is "new" or "reconstructed," only the combustion turbine engine itself will be considered. The construction or reconstruction of a heat recovery steam generator (HRSG) or duct burners associated with a turbine engine covered by subpart GG would not result in the entire facility being subject to subpart KKKK.
- Exempt owners and/or operators of stationary combustion turbines subject to a federally enforceable permit that limits fuel to gaseous fuels containing no more than 20 grains of sulfur per 100 standard cubic feet, or liquid fuels containing no more than 500 parts per million (ppm) sulfur by weight.
- Allow owners and/or operators of stationary combustion turbines covered by 40 *Code of Federal Regulations* (CFR) Part 60, Subpart GG, to petition EPA to comply with subpart KKKK in lieu of subpart GG. This proposed requirement also would apply to associated HRSG units subject to other NSPS.
- Amend the nitrous oxide (NO_x) standard for stationary combustion engines that burn multiple fuels so that it is based on only the fuel burned in the combustion turbine engine and not on the fuel burned in an associated HRSG unit or duct burner.
- Add a provision for an owner or operator to petition for a site-specific NO_x standard for stationary combustion engines that burn fuel byproducts.
- Amend the NO_x standard to include emissions during startup and shutdown operations.
- Amend the optional output-based standard from gross to net output.
- Recognize the environmental benefit from combined heat and power (CHP) facilities by adjusting the energy output by 5 percent to account for avoided transmission and distribution losses.
- Clarify that all sulfur compounds must be measured if a source elects to conduct a fuel analysis to comply with the sulfur dioxide (SO₂) standard.
- Add an affirmative defense to civil penalties that are caused by a malfunction.
- Eliminate requirement for facilities to demonstrate compliance with NSPS by conducting startup on engines not already in operation.
- Provide authorization for facilities with separate but similar operations and similar controls to conduct a single emissions test to represent up to four similar units.

- Provide procedures for demonstrating compliance when multiple combustion engines are exhausted through a single HRSG and when steam from multiple combustion turbine HRSGs is used in a single steam turbine.
- Require submittal of required performance test reports through EPA's Web Factor Information Retrieval ([WebFIRE](#)) database .

EPA is particularly interested in receiving comments regarding the following:

- Providing options for determining when overhauled or refurbished combustion engines would be considered reconstructed and thus subject to this rule in cases in which the owner, operator, or manufacturer is unable to conduct the required construction analysis due to incomplete data on parts replacements.
- Extending the averaging time for simple cycle turbine engines to an operating-day average.
- Allowing owners of any stationary combustion turbine to use a 30-day averaging period when electing to demonstrate compliance with output based standards. (The current rule limits use of the 30-day average for owners/operators of combined cycle and CHP turbines.)
- Developing an appropriate method for recognizing the environmental benefit of district energy systems.
- Adding jet fuel to the definition of distillate oil.
- Exempting SO₂ standard stationary combustion engines that combust more than 50 percent per month of low-British thermal unit (Btu) gas.

Potential Impacts to NASA

If the proposed provisions are finalized, certain facilities affected by this rule could be required to complete the following actions:

- Maintain and follow procedures for demonstrating compliance when multiple combustion engines are exhausted through a single HRSG and when steam from multiple combustion turbine HRSGs is used in a single steam turbine.
- Conduct certain performance tests and submit test results to EPA through WebFIRE.

Additional Information:

Additional information regarding the stationary gas and stationary combustion turbines NSPS is provided on [EPA's website](#).